

NYBSYS NS3161-E-F-V2 4-Port, 31" 3.5GHz 65° Panel Antenna with eRET Tilt

Overview

NYBSYS NS3161-E-F-V2 Antenna is the next-generation forefront of cellular connectivity. This wideband antenna empowers seamless 4G LTE and 5G NR deployments in the 3.3-3.8 GHz frequency range. With its peak performance and versatility, it unlocks new possibilities for network operators, enterprise deployments, and fixed wireless applications.

NS 3161 Antenna has robust 4x4 MIMO abilities to tackle the demanding data traffic with ease and amplify throughput to ensure strong signal quality for multiple users. Its broad coverage takes in the LTE bands 42, 43, and 48, and 5G NR bands n48 and n78, including the coveted CBRS band. Besides, the advanced features like Remote Electrical Tilt (RET) and enhanced tilt range offers customization of signal coverage to your specific needs without any deployment issues.



Key Features

- **Wideband Domination:** The 3.3-3.8 GHz frequency range includes crucial LTE bands 42, 43, and 48, and 5G NR bands n48 and n78, including the CBRS spectrum.
- **4x4 MIMO:** The 4x4 MIMO technology multiplies throughput and signal quality for multiple users simultaneously for a smooth and consistent experience.
- **Precision Beamforming with RET:** The Remote Electrical Tilt (RET) empowers you to electronically adjust the antenna's tilt for pinpoint signal targeting.
- **Enhanced Tilt Range (0-10°):** Fine-tune your signal to perfection with the enhanced tilt range of 0-10° to customize coverage to your specific needs.
- **Field-Replaceable RET Motor:** The field-replaceable RET motor reduces downtime and simplifies maintenance.
- **High-Gain:** The powerful 18 dBi gain boosts range and signal-to-noise ratio for a crystal clear communication, even in tough environments.
- **Consistent Beamwidth and Null Filling:** The NS 3161 delivers consistent beamwidth and null filling to remove signal gaps and provide optimal signal strength.
- **Slant Polarization Versatility:** It supports $\pm 45^\circ$ slant polarization to reduce interference and enhance signal reception.
- **BS EN ISO 9001:2015 Certified:** This antenna adheres to the precise BS EN ISO 9001:2015 quality management standards.



Applications

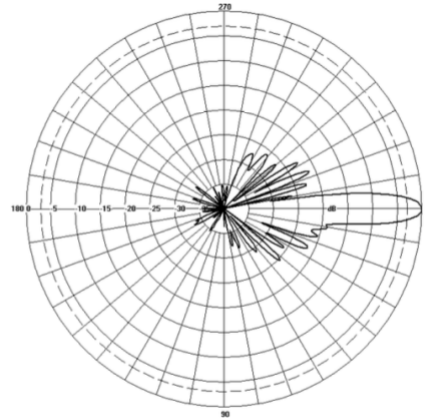
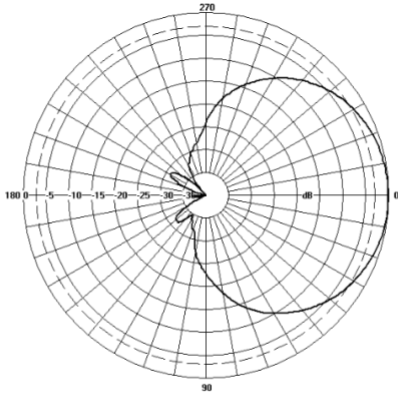
Applications	Benefits
4G LTE and 5G NR Deployments	<ul style="list-style-type: none"> • Wide network coverage • High-capacity, low latency connectivity • Extends reliable cellular access to remote areas
Fixed Wireless Access (FWA)	<ul style="list-style-type: none"> • Reliable high-speed internet access for businesses, campuses, and industrial areas • Wi-Fi backhaul booster • Alternative solutions to cellular backhaul
In-building Coverage	<ul style="list-style-type: none"> • Flawless cellular connectivity within buildings, offices, and shopping malls • Performs best at dense and complex in-building deployments with its beamforming technology and coverage control • Helps to enhance productivity and collaboration
Other Applications	<ul style="list-style-type: none"> • Public safety and emergency response • Smart city initiatives like connecting sensors and devices • Helps to create public Wi-Fi hotspots in parks, stadiums, and other public spaces

Technical Specifications

Electrical Specifications		
Frequency Range	MHz	3300-3800MHz
Polarisation	Degree	+/- 45° Slant Linear
Gain	Basta	dBi
	Max	dBi
Azimuth Beamwidth	Degree	65°
Azimuth Beam Squint	Degree<	3°
Elevation Beamwidth	Degree	7°
Electrical Downtilt	Degree	T0° - T10°
Electrical Downtilt Deviation	Degree<	1°
Impedance	Ohms	50
VSWR	<	1.5
Return Loss	dB>	14
Isolation	dB>	28
Front to Back Ratio: Total Power +/-30°	dB>	30
Upper Sidelobe Suppression, Peak to 20°	dB>	18
Cross-Polar Discrimination (0°)	dB>	18
Maximum Effective Power Per Port	W	150



Representative Pattern Files



Azimuth

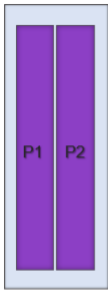
Elevation

Technical Specifications

Mechanical Specifications		
Dimensions	mm (in)	783 (30.8) x 280 (11) x 85 (3.3) - (LxWxD)
Packing Size (LxWxD)	mm (in)	950 (37.4) x 340 (13.4) x 175 (6.9)
Net Weight (antenna)	kg (lb)	9 (19.8)
Net Weight (mount)	kg (lb)	1.5 (3.4)
Shipping Weight	kg (lb)	10.5 (23.2)
Connector Type (Female)	-	4.3-10
Connector Quantity	-	4
Connector Position	-	Bottom
Windload Frontal (at Rated Wind Speed: 150km/h)	N (lbf)	230 (52)
Windload Lateral (at Rated Wind Speed: 150km/h)	N (lbf)	70 (15.7)
Survival Wind Speed	Km/h (mph)	200 (125)
Radome Material	-	ASA/ASA+PC/FRP
Radome Color	RAL	7035 (light grey)
Product Compliance Environmental	-	RoHS
Lightning Protection	-	DC Grounded
Cold Temperature Survival	°C (°F)	-40 (-40)
Hot Temperature Survival	°C (°F)	70 (158)



Array Layout and RET Information



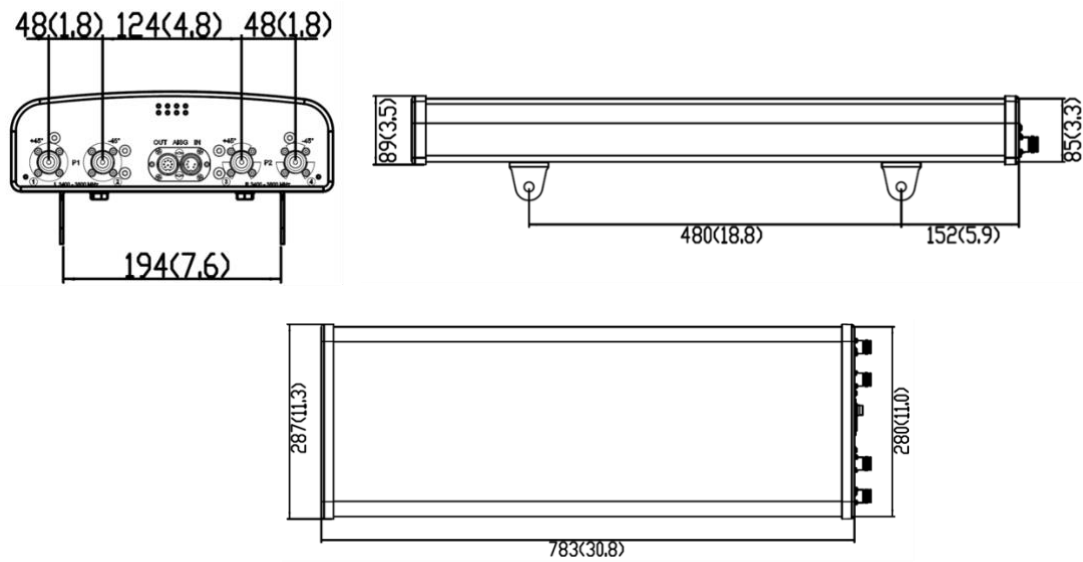
Note: Coloured box sizes do not represent antenna sizes.

Array	Frequency MHz	Ports	RET ID
P1	3300 - 3800	1 - 2	1
P2	3300 - 3800	3 - 4	1

Configuration	
3300-3800 MHz	One RET for both arrays : P1, P2
Total Quantity	One RET Motor Controller
Location and Interface	
RET Controller Location	Inside antenna radome housing
RET Interface	Pair of AISG 8 Pin DIN connectors, one male, one female
RET Interface Quantity	One pair of AISG 8 Pin DIN connectors
RET Interface Location	On connector plate located at bottom of antenna
Electrical	
Input Voltage	10 - 30V
Power Idle Mode	< 1W
Power Active Mode	< 10W
Protocol	3GPP / AISG 2.0

Mechanical Illustration

All measurements are in mm (in)

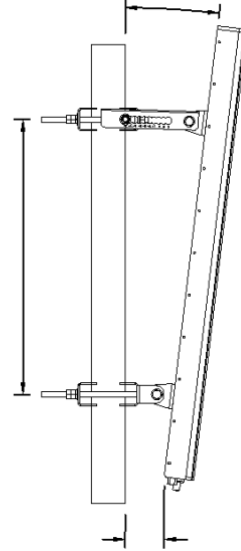
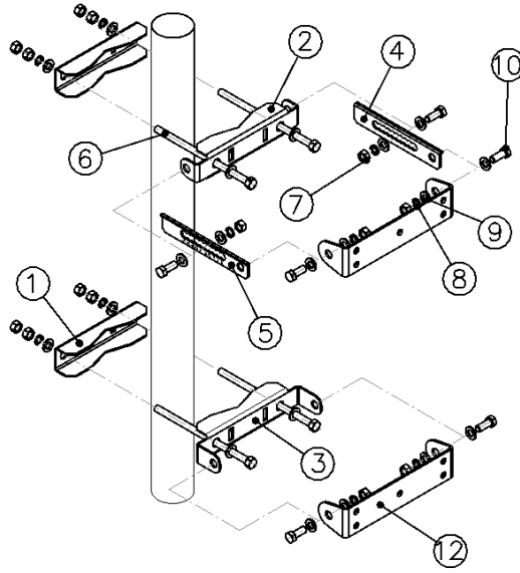




Technical Specifications

Mounting Bracket Kit

CL-V-186 Mount Kit for Panel (Mount Kit included with antenna)



Mounting Kit Tilt Range	Mounting Kit Material	Mounting Kit Pole Diameter
+2° to -10°	Stainless Steel / Galvanised Steel	50mm-115mm (2" to 4.5")